

REMARKS

Applicant appreciates the consideration of the response to the previous Office Action. The applicant has thoroughly studied the Office Action of July 17, 2009 and has submitted this amendment in response to that Office Action. Reconsideration of this application, as amended, is earnestly requested.

Claims 1, 15, and 25 are amended, and claim 2 previously has been cancelled without prejudice: Claims 1 and 3-34 remain pending in the application with claims 1 and 15 being the only independent claims.

Claims 1, 3-25 and 27-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Armstrong (US 5,464,891) in view of Meriaz (US 2002/0113776), and claim 26 as being unpatentable over Armstrong in view of Meriaz and further in view of Yokoji (US 6,909,422). These rejections are respectfully traversed.

103 Rejections

To support a conclusion that the claim would have been obvious, "a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success." *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360, 80 USPQ2d 1641, 1645 (Fed. Cir. 2006). The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). See, MPEP 2142.

In considering the prior art references, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art.

KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82 USPQ2d 1385, 1396 (2007).

In fact, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). *See*, MPEP 2143.01. When considering the references, the references must be considered in their entirety including the portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). *See*, MPEP 2141.02.

Here, Armstrong discloses a hand manipulated controller having a trackball for controlling or manipulating computer graphic images (col. 1: 19-17). The trackball is manipulated to send "information describing rotation of the trackball about three mutually perpendicular axes" (col. 2: 44-46). In describing his invention, Armstrong states "Disadvantages ... I believe I have inventively overcome with present invention, include the requirement that the trackball housing be moved along a surface in order to input linear moment [sic] information" (col. 1: 42-46) and "Unlike the prior art, such as typical mouse devices which require travel of the ball physically over a surface to activate sensors, and the surface area requirement might be great, the present invention requires no significant physical movement along a surface." (col. 4: 15-19).

In other words, Armstrong teaches away from the combination of any other device that requires movement of the device to convey positional information for use by a computer. The Meriaz device is such a device that requires movement of the device to transmit positional information to a computer.

Meriaz describes a mouse device that includes a conventional ball or similar mechanism on the bottom of the mouse housing for detecting relative motion between the mouse housing and a surface, and a trackball mounted on the top of the housing (FIGS. 1 and 2). Meriaz's bottom ball provides course

position information as the mouse housing is moved along a surface and Meriaz's top-mounted trackball provides precise position information as the trackball is manually manipulated (Abstract and paragraphs [0003] and [0006]).

If Meriaz was to be combined with Armstrong, then the Armstrong device would have to have a housing that would be moved along a surface to provide positional information. Armstrong specifically states that the Armstrong device "requires no significant physical movement along a surface." Each of the embodiments described by Armstrong (a tray in a computer (FIG. 4), a housing structured to rest on a support surface (FIG. 8), a hand held housing (FIG. 9), and a conventional keyboard (FIG. 10)) do not require the movement of the housing. If a device such as Meriaz's device were to be combined with Armstrong, Armstrong's housing would have to be moveable to transmit positional information, and such a combination would "render the prior art invention being modified unsatisfactory for its intended purpose" and there would be no motivation for such a combination.

Accordingly, applicant restates the position that there is no motivation to combine the Armstrong and Meriaz references to render the present invention obvious. Meriaz cannot be combined with Armstrong to teach a trackball for use in a pointing device because Armstrong already teaches a trackball. Therefore, the only purpose for combining Armstrong with Meriaz would be to teach a moveable housing having a trackball. As argued *supra*, such a combination would render Armstrong unsatisfactory for its intended purpose, and therefore there is no motivation to combine the references.

In maintaining the rejections, the Examiner acknowledges that Armstrong teaches away from the combination of a conventional mouse. However, the Examiner stated that Meriaz is not merely a conventional mouse and combining it with Armstrong will merely enhance the functionality of Armstrong, not destroy it. Since both Armstrong and Meriaz disclose trackballs, the features that Meriaz would add to Armstrong are the features of a conventional mouse, and according

to the Examiner, Armstrong teaches away from this combination. If the Examiner maintains the rejection, the applicant respectfully invites the Examiner to provide "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

Claims 1 and 15

Applicant amends independent claims 1 and 15 to recite the limitation of "signal circuitry producing a multiplexed outgoing signal ... whereas the multiplexed outgoing signal is capable of being de-multiplexed to provide separate parameters for simultaneously controlling different functions". No new matter is added and support for multiplexing and de-multiplexing is found in at least paragraphs [0067-0072] and FIGS. 1e – 1i, support for simultaneously controlling different functions is found in at least paragraphs [0045-59].

In the Office Action of July 17, 2009 referring to independent claim 1, the Examiner indicated that Meriaz, paragraph [0007] teaches the signal circuitry being configured to multiplex the outgoing displacement signal with the second outgoing signal to form an outgoing multiplexed signal. The Examiner further states the processor can take inputs from both the mouse and the trackball and either the mouse or the trackball can manipulate the cursor, and that the mouse and the trackball can be operated independently which means they can be produced simultaneously as well.

The applicant respectfully disagrees with the Examiner's reading of Meriaz. Meriaz paragraph states "[a] cable is connected to a computer input port for transmission of electrical signals to a central processing unit. ... Manipulation of either said trackball or said bottom ball is effective to direct movement of a cursor on a computer monitor screen for signal inputs to the central processing unit." Meriaz is completely silent on the means of transmission of the signals from the bottom ball and the trackball to the processor; independently as separate signals, multiplexed onto a single signal as required by the application's independent claims, or whether the trackball signal merely biases the bottom ball

signal. However, Meriaz clearly states that each of the trackball and the bottom ball signals act to direct the movement of a screen cursor. Meriaz's use of the trackball and bottom ball signal to only direct the movement of a cursor is further amplified in paragraph [0015], "If a user desires a delicate, detailed movement of the computer cursor, he or she can rotate trackball 16 with a finger. If on the other hand, a user prefers to communicate large, sweeping movements, for example, across the entire width of the screen, or simply for less detailed or accurate movement, he or she optionally may push the mouse housing 12 across a flat surface."

In rejecting an application under §103, the Examiner is required to set forth in the Office Action the relevant teachings of the prior art relied upon (MPEP 706.02(j)), "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)."

In the Office Action of July 17, 2009, the Examiner merely stated that Meriaz teaches a multiplexed outgoing signal by referring to Meriaz's "cable connected to a computer input port." This broad statement in Meriaz does not teach a multiplexed outgoing signal because Meriaz never mentions or implies the type, number, or composition of the signals carried by the cable connected to a computer input port. It is over-reaching by the Examiner to read this statement in Meriaz to teach multiplexed signals, and the Examiner has not presented a convincing line of reasoning as to why the mention of a cable connected to a computer input port teaches multiplexed signals. Armstrong does not teach a pointing device having both a bottom ball and a trackball, and therefore the signals from a bottom ball and a trackball cannot be multiplexed.

The applicant agrees with the Examiner that the bottom ball and the trackball may be operated independently but question that their signals can be produced simultaneously. Meriaz's bottom ball and trackball signals are used for only a single purpose, to effect movements of a cursor on a computer screen. The bottom ball provides signals for less detailed or courser movement of the cursor while the trackball signals are for delicate, detailed movement of the cursor (paragraph [0015]). Because each of the bottom ball and trackball signals control a single function but in different magnitudes, simultaneous signals will not be effective. For this reason, the applicant disagrees with the Examiner that Meriaz teaches that the signals from the bottom ball and trackball are produced simultaneously.

Meriaz does not teach that the bottom ball and the trackball signals provide separate parameters for simultaneously controlling different functions. The Examiner has not presented a convincing line of reasoning as to why simultaneously controlling different functions would be obvious in light of the Meriaz's stated purpose of a bottom ball and trackball controlling the movement of a cursor on a computer screen. The applicant maintains that Meriaz does not teach simultaneously controlling different functions as recited in independent claims 1 and 15.

For at least these reasons, the applicant believes the Examiner has not met his burden for presenting a *prima facie* case of obviousness, and independent claims 1 and 15 are allowable over the cited art.

Claim 25

Dependent claim 25 has been amended to recite the "rotation sensor detects at least one light polarization component." No new matter has been added and this amendment finds support in at least paragraph [0103]. None of the cited prior art teaches detecting a light polarization component. For at least this reason, Armstrong and Meriaz, alone or in combination, do not teach a

"rotation sensor detect[ing] at least one light polarization component," and claim 25 is patentable over these references.

Claims in Condition for Allowance

As set forth in MPEP 2143, to show a *prima facie* case for obviousness, all the prior art references, either individually or combined, must teach all the claim limitations. None of Armstrong and Meriaz teaches "signal circuitry producing a multiplexed outgoing signal ... whereas the multiplexed outgoing signal is capable of being de-multiplexed to provide separate parameters for simultaneously controlling different functions." Also, as argued *supra*, there is no motivation to combine Armstrong and Meriaz as required by the *prima facie* case for obviousness. Applicant submits that a *prima facie* case for obviousness has not been shown and that claims 1 and 15 are patentable over the cited prior art. Additionally, claims 3-14 and 16-34 are patentable at least by virtue of dependence upon a patentable independent claim.

CONCLUSION

In view of the above amendments and remarks, applicant respectfully requests reconsideration and withdrawal of the rejections, and an early indication of the allowance of the claims. Applicant believes the claims are in condition for allowance and respectfully solicit favorable action.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim, unless applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

If any points remain at issue that the Examiner feels may be best resolved through a telephone interview, the Examiner is kindly invited to contact the undersigned by telephone at (909) 621-2059 or by email at cwschmoyer@yahoo.com.

Respectfully submitted,

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